

REMARKS

Pursuant to 37 C.F.R. §1.116, reconsideration of the instant application, as amended herewith, is respectfully requested. Entry of the amendment is requested.

Claims 1-8 and 21-28 are presently pending before the Office. No claims have been canceled. Applicant has amended the claims. No new matter has been added. Support for the amendments can be found throughout the specification as originally filed. Applicant is not intending in any manner to narrow the scope of the originally filed claims.

The Examiner's Action mailed April 28, 2005 and the references cited therein have been carefully studied by Applicant and the undersigned counsel. The amendments appearing herein and these explanatory remarks are believed to be fully responsive to the Action. Accordingly, this important patent application is believed to be in condition for allowance.

Applicant herein submits terminal disclaimer for US 6689259 and US 6866756 to overcome the judicially created obviousness-type double-patenting rejections of the Examiner.

Applicant herein cancels the previously withdrawn claims.

The Examiner has objected to claim 1 alleging that the phrase "are not connected electrically to a power source" is unclear since the preceding clause does not relate to the supplemental electrodes. Applicant disagrees as line 8 of the claim refers to "one or more

supplemental electrodes. Nevertheless, applicant has amended claim 1 as suggested by the Examiner.

Relying on 35 U.S.C. §112, second paragraph, the Office has rejected the subject matter of claim 1 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner alleges that the term non-vented is used by the claim to mean "intermittently opened". Applicant does not understand the Examiner's interpretation of its March 8 arguments on page 16. The electrolyzer is adapted to be installed and used in a closed pressurized system so it is always under pressure, and is not vented off when a demand is made for more gas. Applicant respectfully traverses the rejection and requests reconsideration.

Applicant submits that claim 1 does define the legal metes and bounds of the invention. It is not the role of the claims to enable one skilled in the art to reproduce the invention but rather to define, for those skilled in the art the legal metes and bounds of the invention. Nevertheless, in order to advance the case to allowance, claim 1 has been amended.

It is respectfully submitted that claim 1, as amended herein, fully complies with 35 U.S.C. §112, second paragraph. Withdrawal of the rejection is respectfully requested.

Relying on 35 U.S.C. §103(a), the Examiner has rejected the subject matter of claims 1-8 as obvious over Lin in view of Wong et al. Applicant respectfully traverses the rejection and requests reconsideration.

It is evident that Applicant's invention is decidedly different from the teachings of the Lin patent or the combination of the Lin and Wong patents.

One has to look at the structure of Lin very carefully. Lin has two separate reservoir regions 4, that is, two gas tanks, one for each of the two separate gases generated. Lin apparatus is designed from conception to produce two separate gases. The gas produced by the present invention is designed from conception to produce one, singular gas.

As noted, where the Lin apparatus has two separate gas tanks for collection, the present invention uses one, singular tank, that collects the produced gas.

The examiner states that use and form of applicant's gas is not relevant to an apparatus claim. Applicant submits that the Lin apparatus, as designed, is incapable of operating in the same manner by admission in the Lin disclosure that he is producing and separating the electrolyte into two separate gases through piping connections 241,243 for each gas generated. The lid member 23, the apertures 211, the groove portions 210 and formed isolated sections 207 are configured such that hydrogen gas will rise to one of cavities 231,232 and the oxygen gas will rise to the other cavity. Therefore, it is incapable of producing a single gas having the characteristic of a combustible gas composed of combinations of hydrogen and oxygen atoms structured according to a general formula H_mO_n wherein m and n have null or positive integer values with the exception that m and n can not be 0 at the same time.

The examiner is also asked to review the specification at pp. 22-27, wherein it is disclosed that several independent labs conducted tests to analyze applicant's produced gas using applicant's apparatus as claimed. The tests run by the independent labs confirm that the jointly produced H and O gas of the present invention has in fact bonding capabilities and in fact has variable energy release capabilities, capabilities not possible using the Lin apparatus.

The Examiner states that the electrolyzer of Lin appears to be a closed pressurized piping system. However, while applicant's invention is adapted such that electrolytic solution can be added as necessary while maintaining a closed pressurized system, the Lin device must be shut down and the cover plate 24 removed in order to add electrolyte, an extremely inefficient system to say the least.

The Examiner states that the electrolyzer of Lin has an identical structure to that of the present invention so it would be capable of producing a gas with a varying energy content depending on its use. This can not be because the gases produced are different as discussed above. The energy content of hydrogen and that of oxygen separately produced has to have a different characteristic than a combined gas where the constituents of H and O are jointly produced to produce a gas composed of combinations of hydrogen and oxygen atoms structured according to the general formula H_mO_n .

In fact, the separately produced H and O gases of Lin could become very volatile if combined under the right circumstances. Therefore, the separate cavity/separate tank design of Lin is critical to producing two separate gases in a safe environment.

The present invention uses external fins for heat sinks. The Lin device uses insulator panels inside that would negatively impact the effect of its external fins. The present invention lacks such panels so its heat sink feature is more efficient.

Lin's apparatus uses corrugated electrolytic plates while the present invention uses flat plates.

As mentioned above, the lid design and cavities of Lin provide for a design which is chambered to separate the two gases, while the present invention is non-chambered and the lid is top plate is flat.

As discussed above, the Lin apparatus electrolyzer produces a combustible gas that is a post-production mixture of standard hydrogen (H₂) and standard oxygen (O₂). The Lin apparatus electrolyzer produces the hydrogen and oxygen gases separately and then mixes them in a post-production manner and as such the combustible gas is nothing more than a standard H₂, O₂ mixture that is inherently unstable and which upon combustion will have a "fixed" combustion flame temperature and no bonding capabilities. The present invention produces a hydrogen/oxygen gas in a molecularly altered combined state that is inherently stable and which upon combustion has "variable" combustion flame temperature and novel bonding capabilities.

The Lin apparatus electrolytic plates are all made of the same materials. The present invention plates vary by using different materials on different plates (plates made substantially from nickel such as 99% and opposing plates that are made substantially from stainless steel that may contain some nickel such as 14% nickel plates). The use of different materials on opposing plates positively demonstrates that the Klein apparatus electrolyzer is producing a different gas from the Lin apparatus electrolyzer. (See the gas lab reports, mass specs, etc., in the specification). Lin apparatus clearly makes separate and standard Hydrogen (H₂) and separate and standard Oxygen (O₂) and was clearly designed with this output in mind. The separate and standard H₂ and O₂ gases produced by the Lin apparatus electrolyzer do not have the variable energy release capabilities or the bonding capabilities as the singular gas that is produced by the present inventive electrolyzer.

The Examiner alleges that Wong inherently teaches the spacing limitation of the present invention. Applicant disagrees after reviewing the Wong disclosure. The Lin apparatus electrolytic plate spacing is different than the present invention electrolytic plate spacing as Lin fails to teach the spacing of 0.15 to 0.35 inches between plates. However, Wong effectively

teaches that efficiency is increased as spacing is increased and the spacing taught by Wong is 0.5 inches or greater, up to 4.0 inches. (See Table 4, Example 4 in col. 5 of the Wong disclosure). If there is an optimum taught, it seems to be in the 2 to 3 inch spacing realm. Therefore, the Wong disclosure teaches away from the present invention.

Accordingly, the Examiner has not established a prima facie case of obviousness.

Applicant respectfully submits that the Examiner's legal reasoning is flawed. The knowledge of those skilled in the art is derived from the prior art, not from the Examiner's mental impression of what those skilled in the art might or might not know. It is the law as evidenced in Graham v. John Deere that is controlling. As enunciated by the Graham court, §103(a) requires a comparison of the claimed invention with the teachings of the prior art. Otherwise, the PTO could simply say "I'm skilled in the art. That claim is obvious." The rules and the law require that the Examiner point out where in the prior art lies Applicant's claimed invention in the context of what those skilled in the art know. If it is not there, the public is not in possession of the invention, and, therefore, a rejection under 35 U.S.C. §103(a) will not lie.

Nevertheless, in order to advance the case to allowance, Applicant has amended claims 1 and 21. Claims 1-8 and 21-28 are patentable over the art of record. Accordingly, withdrawal of the rejection is respectfully requested.

CONCLUSION

Even though the initial claims in this important patent application were drawn to a new, useful and nonobvious invention, they have now been amended to increase their specificity of language. Applicant respectfully submits that claims 1-8 and 21-28 are patentable over the art of record.

A Notice of Allowance is earnestly solicited.

If the Office is not fully persuaded as to the merits of Applicant's position, or if an Examiner's Amendment would place the pending claims in condition for allowance, a telephone call to the undersigned at (727) 943-9300 would be appreciated.

Very respectfully,

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